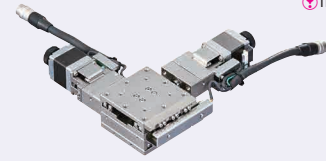


For CAD data, see the MISUMI website.

Features: Integrated Linear Ball Slide Guides with High Precision and rigidity.

XY-Axis Motorized Stage



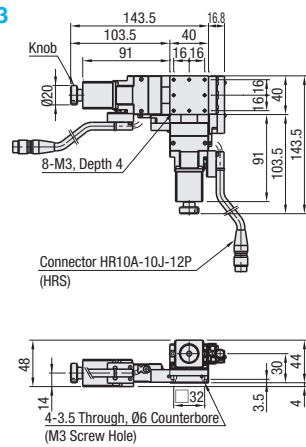
The photo shows the cover position R type for Nos. 413, 513, 615 and 715.

- M** Material: SUS440C Equivalent
- S** Surface Treatment: Electroless Nickel Plating
- A** Accessory: XYMSG413/513/430/530: SCB3-8, 4 pcs.
XYMSG615/715/650/750: SCB4-8, 4 pcs.

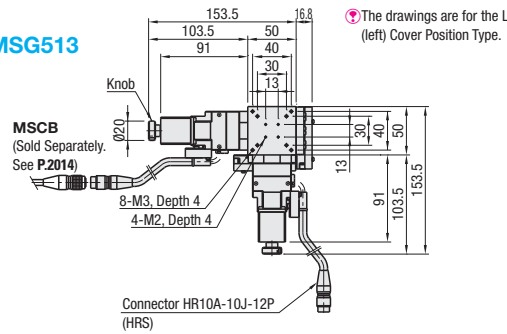
For Controllers, Handset Terminals, see P. 2014-1-P. 2014-2 The Hex Wrench dedicated for tightening XY-bottom axis is included with.

RoHS 10

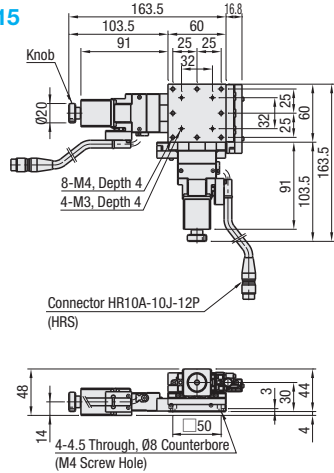
XYMSG413



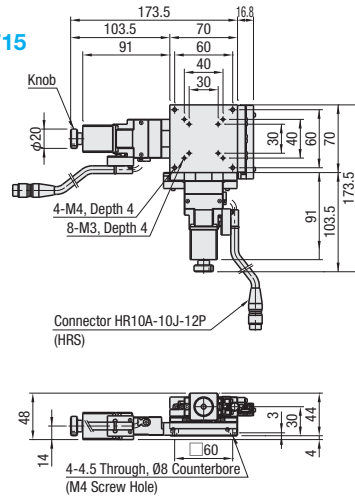
XYMSG513



XYMSG615



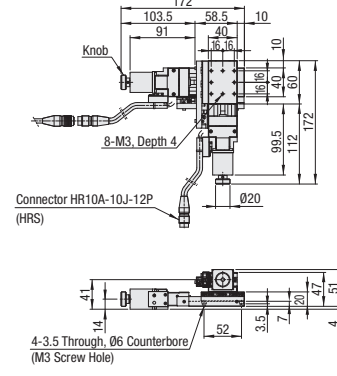
XYMSG715



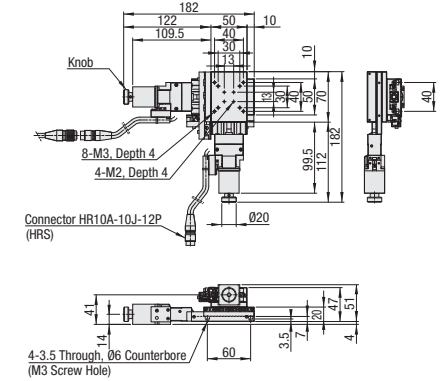
Part Number	Sensor			Motor	Cable	Mechanical Standards				Accuracy Standards						
	Type	No.	Cover Position			Stage Surface (mm)	Travel Distance (mm)	Weight ³ (kg)	Load Capacity (N)	Unidirectional Positioning Accuracy (for a single axis stage horizontally placed)	Moment Rigidity ⁴ (°/N·cm)	Pitching	Yawing	Pitching	Yawing	
XYMSG	413	L (Standard) R (Reversed)	A (All N.C.) B (All N.O.) C (Limit Switches are N.C., Home Sensor is N.O.)	5" 24"	C (Standard) D (High Torque) E (High Resolution) MA ² (With Electromagnetic Brake) PA ² (α-Step) UA ² (For Servo Motor)	N (Cable not included (separately sold)) M ² (For Motor with Electromagnetic Brake) U ² (For α-Step) P ² (For Servo Motor)	40X40	13	1.0	93.1	6μm or less	0.22	0.17	0.12	15" or less	10" or less
	513						50X50	1.2	92.1	0.14		0.1	0.06			
	615						60X60	1.7	91.1	0.08		0.07	0.03			
	715						70X70	1.8	89.2	0.03		0.03	0.01			
	430						40X60	1.4	90.5	0.24		0.18	0.26			
	530						50X70	1.7	88.5	0.12		0.13	0.1			
650	60X100	2.5	84.4	0.05	0.05	0.05	20" or less	15" or less								
750	70X110	2.7	82.7	0.03	0.03	0.03										

*1 24VDC sensors cannot be operated from the MSC1102/112 controller. When selecting 5V for voltage configuration, applying over 5V voltage will cause breakage.
 *2 For motor options MA and PA, the driver is included in the set. For motor option UA, the amp is included in the set. With motor option MA, only cable option M is selectable. With motor option PA, only cable option P is selectable. With motor option UA, only cable option U is selectable. In all three cases, cable option N (no cable) is not selectable.
 *3 The value is for C Type of Motor.
 *4 Accuracy specifications are for single axis (horizontal orientation) configuration.

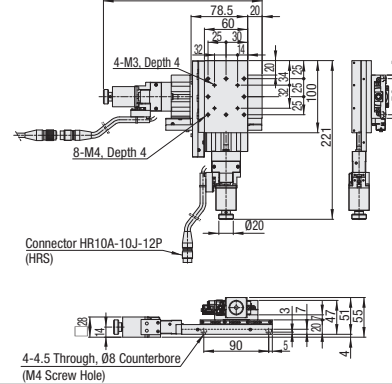
XYMSG430



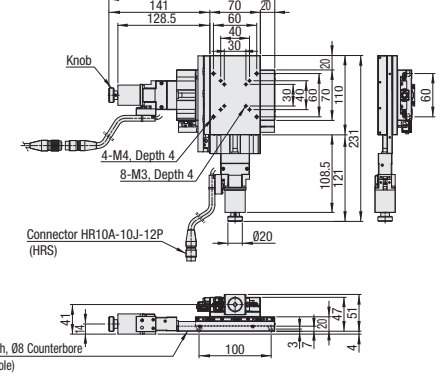
XYMSG530



XYMSG650



XYMSG750



Ordering Example	Part Number	Sensor	Motor	Cable
	XYMSG413	LA5	C	N

Common Specifications

Feed Screw	Ball Screw Ø6, Lead 1
Guide	Linear Ball Guide
Resolution ¹	2μm/Pulse (Full) 1μm/Pulse (Half)
Positioning Repeatability	Within ±0.5μm
Lost Motion	1μm or less
Backlash	0.5μm or less
Parallelism	15μm or less

¹ Stage travel per one pulse.
 Accuracy specifications are for single axis (horizontal orientation) configuration.

Motor/Cable Application Table

Motor	Cable
C, D, E	N (Not Provided)
MA	M
PA	P
UA	U

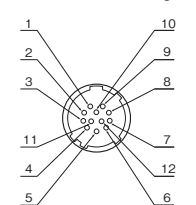
For the cable for C, F or G, see MSCB on P. 2014-3

Max. Speed

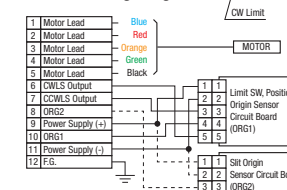
Motor (mm/sec)	MA	Motor (mm/sec)	UA
C	10	PA	15
D	25	PA	35
E	20	UA	50

Note that the speed and positioning time will vary depending on the usage conditions. The values shown here are MISUMI's reference values. Operation at these values is not guaranteed.

Connector Pin Configuration



Connecting Diagram



The dotted line connections are not functional when a standard cable is used.

The above is the connector pin configuration/wiring diagram for C, F, G.

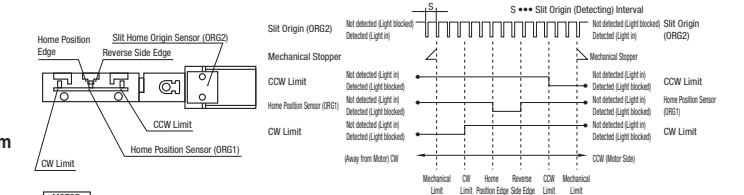
Electrical Specifications

Motor	Type	5-Phase Stepping Motor 0.75A/Phase (Oriental Motor Co., Ltd.)
	Step Angle	0.72°
Compatible Receptacle Connector		HR10A-10P-12S (Hirose Electric Co., Ltd.)
Current Consumption		100mA or less (25mA per Sensor)
Control		NPN Open Collector Output DC5 ~ 24V, 16mA or less
Output		Residual Voltage 0.4V or less (when load current is 16mA)
Sensor	Output Logic	N.C ●●● Light seen N.O ●●● Light blocked <Internal Circuit>
		<p>K: Emitter Cathode V: Receptor Supply+ A: Receptor Anode O: Output G: Receptor Supply-</p>

Days to Ship

Configure Online

Included Sensor Timing Chart (for A Sensor Logic)



Travel Distance	Reference Position	Mechanical Limit	CW Limit	Other Signal Edge	Home	CCW Limit	Mechanical Limit
13	Homring	8	7.5	2	0	6.5	7
15	Homring	9	8.5	2	0	7.5	8
30	Homring	16.5	16	2	0	15	15.5
50	Homring	26.5	26	2	0	25	25.5

Common Sitt Home Position (Detecting) Interval S=1
 • Homing Routine Above: When MSC1102/112 controller is used and when the Homing Routine Type 3 (see below) is executed.
 • The coordinates shown are design values. There may be approx. ±0.5mm misalignment on the physical dimensions.
 • For recommended Method for Return to Origin, XMSG (P. 2010).